UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/038,203	10/19/2001	Krishnendu Chakraborty	30014200-1067/P6339NP	8440

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EXAMINER
MAHMOUDI, HASSAN

ART UNIT	PAPER NUMBER
2175	6

DATE MAILED: 04/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- ·If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _20 October 2003_.

2a)☐ This action is **FINAL.**   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-36_ is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-36_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.
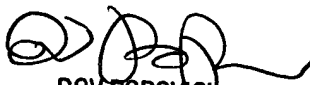
Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form·PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All   b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

DOV POPOVICI
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Remarks

1. In response to communications filed on 20-October-2003, claims 1-36 are presently pending

in the application.

Specification

2. The specification is objected to because the arrangement of the disclosed application does not

conform with 37 CFR 1.77(b).

   Section heading appear <u>underlined</u> throughout the disclosed specification. Section

headings should not be <u>underlined</u>. Appropriate corrections are required according to the

guidelines provided below:

3. The following guidelines illustrate the preferred layout for the specification of a utility

application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include
the following sections in order. Each of the lettered items should appear in upper case, without
underlining or bold type, as a section heading. If no text follows the section heading, the phrase
"Not Applicable" should follow the section heading:

   (a) TITLE OF THE INVENTION.
   (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
   (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR
        DEVELOPMENT.
   (d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A
        COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program
        listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables

having more than 50 pages of text are permitted to be submitted on compact

discs.) or

REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a).

"Microfiche Appendices" were accepted by the Office until March 1, 2001.)

(e) BACKGROUND OF THE INVENTION.

(1) Field of the Invention.

(2) Description of Related Art including information disclosed under 37 CFR 1.97

and 1.98.

(f) BRIEF SUMMARY OF THE INVENTION.

(g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).

(h) DETAILED DESCRIPTION OF THE INVENTION.

(i) CLAIM OR CLAIMS (commencing on a separate sheet).

(j) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).

(k) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence

Listing" is required on paper if the application discloses a nucleotide or amino

acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence

Listing" is not submitted as an electronic document on compact disc).

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the
> subject matter which the applicant regards as his invention.

5. Claims 1-36 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for

failing to particularly point out and distinctly claim the subject matter which applicant

regards as the invention.

Claim 1, in line 1; claim 10, in line 1; claim 19, in line 3; and claim 28, in line 1 recite the

limitation "merging one or more hierarchical trees". Since the term "one" or "more" is in the

alternative format, it is not clear that if there is only "one" tree, what that "one" tree would be

merged with. For the purpose of examination, the examiner is making the assumption that in

the case where there is only one hierarchical tree, the nodes of that hierarchical tree are to be merged. Appropriate corrections are required.

Claim 1, in lines 5 and 6; claim 10, in lines 6 and 8; claim 19, in lines 8-9 and 11; and claim 28, in lines 6 and 7 recite the limitation "winning nodes". The above claims do not state the criteria for what the "winning" is based on. Appropriate corrections are required.

Claims 2-9 are rejected under 35 U.S.C. 112, second paragraph, as being dependents from the rejected independent claim 1.

Claims 11-18 are rejected under 35 U.S.C. 112, second paragraph, as being dependents from the rejected independent claim 10.

Claims 20-27 are rejected under 35 U.S.C. 112, second paragraph, as being dependents from the rejected independent claim 19.

Claims 29-36 are rejected under 35 U.S.C. 112, second paragraph, as being dependents from the rejected independent claim 28.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 1, 4, 6-8, 10, 13, 15-17, 19, 22, 24-26, 28, 31, and 33-35 are rejected under 35 U.S.C.

103(a) as being unpatentable over Kothuri et al (U.S. Patent No. 6,470,344) in view of Sigeti

et al (U.S. Patent No. 6,208,997.)

As to claim 1, Kothuri et al teaches a method for merging one or more hierarchical trees

(see Abstract, and see column 19, lines 33-37), comprising:

examining one or more nodes in each of the hierarchical trees (see column 20, lines 25-

34);

determining if there are one or more sets of equivalent nodes in the hierarchical trees (see

column 25, lines 33-43, where "equivalent nodes" is read on "in case of a tie where more

than one node has the same low access count");

picking one or more winning nodes from each of the sets of equivalent nodes (see column

17, lines 4-14); and

storing one or more reference nodes to the winning nodes (see column 9, lines 44-55;

column 17, lines 59-65; and see column 23, lines 1-13.)

Kothuri et al does not teach merging the hierarchical trees at runtime.

Sigeti et al teaches a real-time view space representation data production (see Abstract),

in which he teaches merging the hierarchical trees at runtime (see column 6, lines 43-48, and

see column 22, lines 39-44.)

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified <u>Kothuri et al</u> to include merging the hierarchical trees at runtime.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified <u>Kothuri et al</u> by the teaching of <u>Sigeti et al</u>, because merging the hierarchical trees at runtime would enable the system to merge the related data nodes in large databases only when the desired function is being run (executed). For instance, in an on-line HELP environment, the merging of the hierarchical trees at runtime would enable merging the HELP related data nodes upon execution of the HELP function.

As to claims 4, 13, 22, and 31, <u>Kothuri et al</u> as modified teaches wherein the reference nodes are one or more pointers (see <u>Kothuri et al</u>, column 9, lines 44-55, and see column 17, lines 63-65.)

As to claims 6, 15, 24, and 33, <u>Kothuri et al</u> as modified teaches wherein the picking further comprises:

examining one or more priorities associated with one or more members in each set of the equivalent nodes (see <u>Kothuri et al</u>, column 27, lines 10-44); and

selecting the winning node as the member with a highest of the priorities (see <u>Kothuri et al</u>, column 27, line 65 through column 28, line 19.)

As to claims 7, 16, 25, and 34, <u>Kothuri et al</u> as modified teaches further comprising

generating one or more shallow clones for the winning nodes; and adding the shallow clones

to a merged tree (see <u>Kothuri et al</u>, column 18, lines 1-15, and see column 19, lines 4-43.)

As to claims 8, 17, 26, and 35, <u>Kothuri et al</u> as modified teaches wherein the hierarchical

trees include a group tree, a user tree, and an admin tree (see <u>Kothuri et al</u>, figure 4, where

multi-level hierarchical trees are shown. It is inherent that in a hierarchical tree structure, the

tree consists of multiple levels, i.e. "group level", "user level", and "admin level", which in

the referenced figures, can be depicted in any of the hierarchical levels. Also see column 3,

lines 44-55, and see column 8, lines 45-61.)

As to claim 10, <u>Kothuri et al</u> teaches a system for merging one or more hierarchical trees

(see Abstract,; column 1, lines 9-14; and see column 19, lines 33-37) comprising:

one or more nodes in each of the hierarchical trees configured to be examined (see

column 20, lines 25-34);

one or more sets of equivalent nodes in the hierarchical trees configured to be located if

the sets of equivalent nodes exist (see column 25, lines 33-43, where "equivalent nodes" is

read on "in case of a tie where more than one node has the same low access count");

one or more winning nodes configured to be picked from each set of the equivalent nodes

(see column 17, lines 4-14); and

one or more reference nodes to the winning nodes configured to be stored to the winning

nodes (see column 9, lines 44-55; column 17, lines 59-65; and see column 23, lines 1-13.)

For the teaching of "merging the hierarchical trees at runtime", the applicant is kindly

directed to the remarks and discussions made in claim 1 above.

As to claim 19, Kothuri et al teaches a computer program product (see column 5, line 66

through column 6, line 19) comprising:

a computer usable medium (see column 6, lines 7-12) having computer readable program

code embodied therein (see column 6, lines 12-16) configured to merge one or more

hierarchical trees (see Abstract, and see column 19, lines 33-37) comprising:

For the remaining steps of this claim, the applicant is kindly directed to the remarks and

discussions made in claim 1 above.

As to claim 28, Kothuri et al teaches an apparatus (see Abstract, and see column 6, lines

23-33) for merging one or more hierarchical trees (see Abstract, and see column 19, lines 33-

37) comprising:

For the remaining steps of this claim, the applicant is kindly directed to the remarks and

discussions made in claim 1 above.

8.   Claims 2, 9, 11, 18, 20, 27, 29, and 36 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Kothuri et al (U.S. Patent No. 6,470,344) in view of Sigeti et al (U.S.

Patent No. 6,208,997), as applied to claims 1, 4, 6-8, 10, 13, 15-17, 19, 22, 24-26, 28, 31, and

33-35 above, and further in view of Hsing et al (U.S. Publication No. 2002/0023113.)

As to claims 2, 11, 20, and 29, Kothuri et al as modified still does not teach wherein the hierarchical trees are document object model (DOM) trees.

Hsing et al teaches a remote document updating system (see Abstract), in which he teaches wherein the hierarchical trees are document object model (DOM) trees (see Abstract; figure 8; and see paragraphs 18-19.)

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Kothuri et al as modified, to include wherein the hierarchical trees are document object model (DOM) trees.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Kothuri et al as modified, by the teaching of Hsing et al, because including wherein the hierarchical trees are document object model (DOM) trees, would provide a "complete picture" of the document, as taught by Hsing et al (see figure 7, and see paragraph 48) and would further enable the system, by using XML (extensible Markup Language) documents to represent the local database, and further using the DOM (Document Object Model) established by the World Wide Web Consortium (W3C), to provide a standardized interface for manipulation of the XML document, as taught by Hsing et al (see paragraph 5.)

As to claims 9, 18, 27, and 36, Kothuri et al as modified teaches wherein the DOM trees are eXtensible Markup Language (XML) DOM trees (see Hsing et al, figures 7-8, and see paragraphs 5, 19 and 48.)

9. Claims 3, 12, 21, and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Kothuri et al (U.S. Patent No. 6,470,344) in view of Sigeti et al (U.S. Patent No. 6,208,997),

as applied to claims 1, 4, 6-8, 10, 13, 15-17, 19, 22, 24-26, 28, 31, and 33-35 above, and

further in view of Geil (U.S. Patent No. 3,662,400.)

As to claims 3, 12, 21, and 30, Kothuri et al as modified still does not teach:

printing a merged tree using the reference nodes.

Geil teaches a subsidiary document identification system (see Abstract), in which he

teaches printing a merged tree using the reference nodes (see column 10, lines 45-60.)

Therefore, it would have been obvious to a person having ordinary skill in the art at the

time the invention was made to have modified Kothuri et al as modified, to include printing a

merged tree using the reference nodes.

It would have been obvious to a person having ordinary skill in the art at the time the

invention was made to have modified Kothuri et al as modified, by the teaching of Geil,

because printing a merged tree using the reference nodes, would enable the user to obtain a

copy of the properly arranged, tier-oriented detail merged tree, as taught by Geil (see column

10, lines 65-67.)

10. Claims 5, 14, 23, and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Kothuri et al (U.S. Patent No. 6,470,344) in view of Sigeti et al (U.S. Patent No. 6,208,997),

as applied to claims 1, 4, 6-8, 10, 13, 15-17, 19, 22, 24-26, 28, 31, and 33-35 above, and

further in view of Blais et al (U.S. Pub. No. 2002/0178437.)

As to claims 5, 14, 23, and 32, <u>Kothuri et al</u> as modified still does not teach wherein the reference nodes are one or more Java references.

<u>Blais et al</u> teaches an object-oriented allocation method and apparatus (see Abstract), in which he teaches wherein the reference nodes are one or more Java references (see page 4, paragraph 66.)

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified <u>Kothuri et al</u> as modified, to include wherein the reference nodes are one or more Java references.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified <u>Kothuri et al</u> as modified, by the teaching of <u>Blais et al</u>, because the reference nodes being one or more Java references, would provide an object-oriented environment (Java environment) for referencing memory and accessing objects without explicitly checking the object.

Response to Arguments

11. Applicant's arguments filed on 20-October-2003 with respect to the rejected claims in view of the cited references have been fully considered but they are moot in view of the new grounds for rejection.

Conclusion

12. Any inquiries concerning this communication or earlier communications from the examiner should be directed to Tony Mahmoudi whose telephone number is (703) 305-4887. The examiner can normally be reached on Mondays-Fridays from 08:00 am to 04:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Dov Popovici, can be reached at (703) 305-3830.

tm

March 24, 2004

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